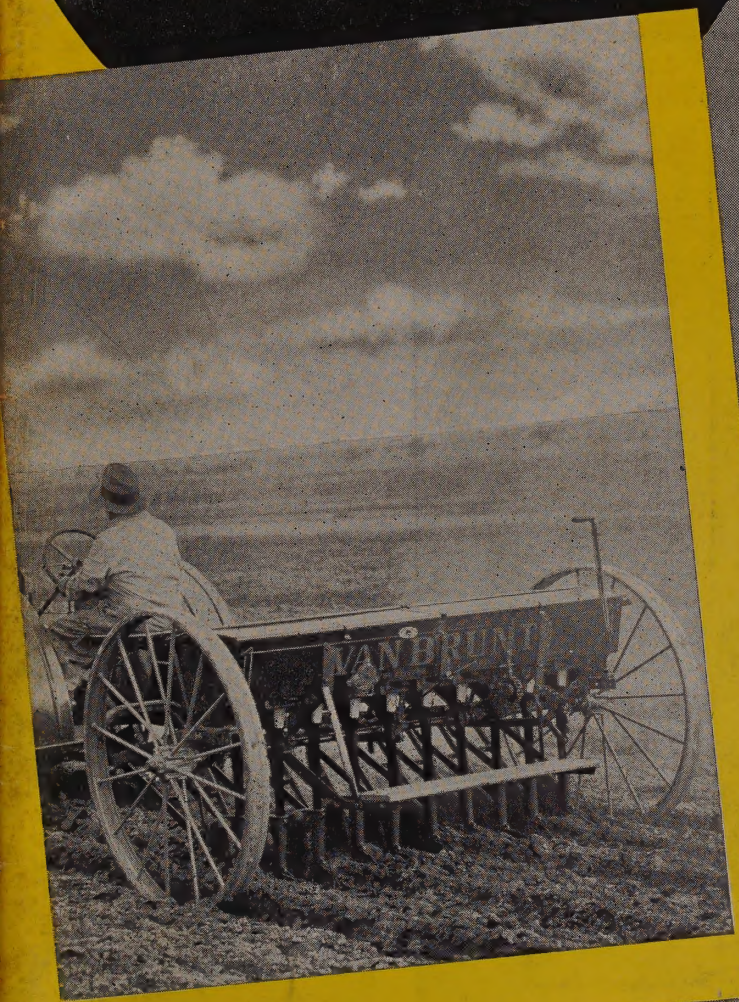
JOHN DEERE

VAN BRUNT

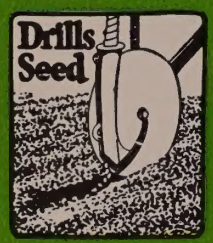
Model "F" Combination

FERTILIZER GRAIN DRILLS



When you buy John Deere Implements you are sure of prompt repair service during their long life.

4 Jobs Once Over



JOHN DEERE-VAN BRUNT COMBINATION FERTILIZER-GRAIN DRILLS Assure Bigger Yields

Most Soils Need Fertilizer

Very few farms have soils that contain all of the essential plant food elements in proper proportion to produce maximum yields.

Plant food elements that are used by the growing crops must be replenished by man in order to keep the soil producing satisfactorily year after year.

Starving soil is no more capable of producing maximum crop yields than a starving man is of doing an efficient day's work, or a starving dairy cow is of giving a full measure of milk and butterfat. They all need proper nourishment.

Plant food can be supplied to best advantage at the same time the seeding is done—with a John Deere-Van Brunt Model "F" Fertilizer-Grain Drill, the drill that handles all kinds of commercial fertilizers efficiently and economically. The fertilizer can be drilled in through the seed tubes together with the seed, or through separate tubes, which permit the fertilizer to be released after a layer of soil has fallen over the seed, thus preventing it from coming in contact with the seed.

Kansas Tests Prove Benefits

In a series of tests conducted at the Kansas Agricultural Experiment Station to determine whether drilling fertilizer in rows with the seed was better than broadcasting, the drilling method resulted in a gain of 14.7 bushels of wheat per acre as compared to 8.3 bushels increase when the fertilizer was broadcast.

The tests proved that the row method of applying fertilizer for wheat has important advantages over broadcasting just as it has in fertilizing corn, potatoes and other row crops.

"In other words," says Dr. F. L. Duley of the Kansas Station, "we are coming more and more to the idea of fertilizing the crop rather than fertilizing the soil."

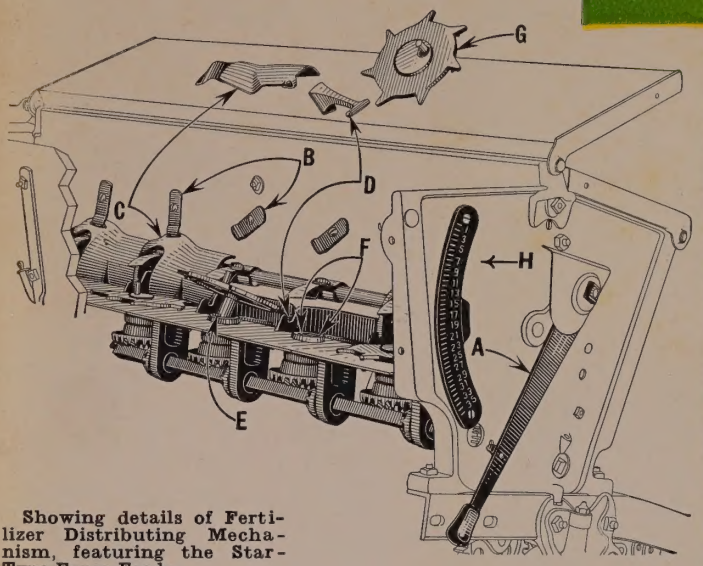
THE most economical and profitable way to apply fertilizer to your crops is to drill it in at the same time the seeding is done, using a John Deere-Van Brunt Model "F" Combination Fertilizer-Grain Drill. Not only does this method assure bigger yields and prevent waste of fertilizer, but it also saves time and labor at the busiest time of the year, when delays are costly.

Actually, this John Deere-Van Brunt Combination Drill does four important operations in one trip over the field—it pulverizes the soil, drills in the seed, drills in the fertilizer, and covers both the seed and the fertilizer. When the grass seed attachment is used, grass seed also can be sown at the same time. Both the grain and grass feeds, and also the fertilizer feeds can be thrown out of gear and the disks used alone for stirring the surface soil; or, you can drill in grain, grass seed or fertilizer alone.

Less fertilizer is required when drilled in the row than when broadcast, and the results are far better. All of it is placed within reach of the growing plants; none is wasted, when a John Deere-Van Brunt Drill is used.

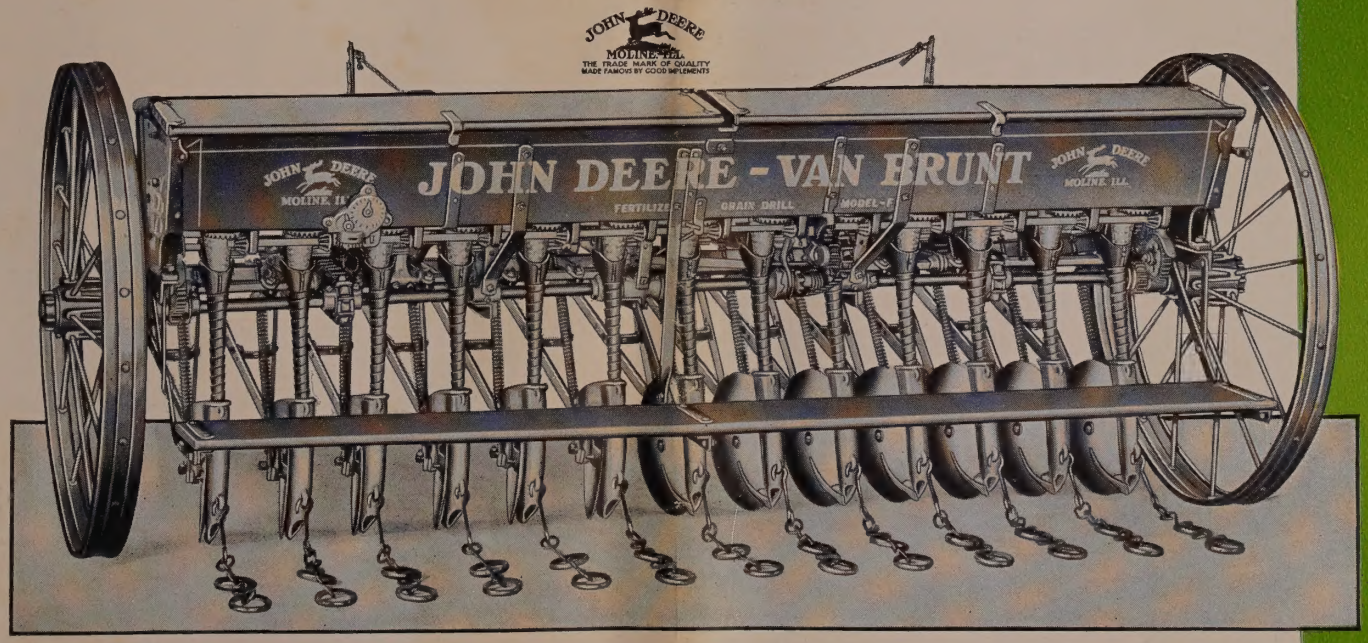
Early in the season when the ground is cold and

Efficient Fertilizer Distributing Mechanism



Showing details of Fertilizer Distributing Mechanism, featuring the Star-Type Force-Feeds.

A—Shifter lever; B—Shed plate latch; C—Shed plate; D—Knockers; E—Safety break pin on feeder wheel; F—Bevel gear; G—Feeder wheel; H—Index plate.

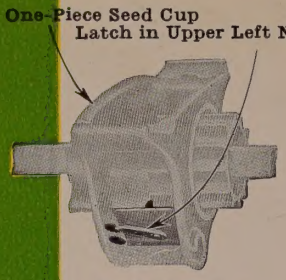


This is the 13x7 Model "F" Fertilizer-Grain Drill with tractor power lift, full-length footboard and steel wheels. This is one of the most popular sizes.

JOHN DEERE-VAN BRUNT ADJUSTABLE-GATE FLUTED FORCE-FEED

Position No. 1

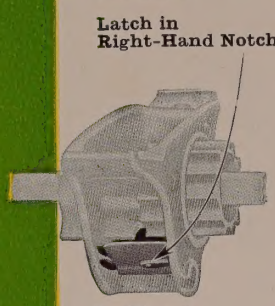
When the gates are up with the latches in the top notch on the left-hand side of the seed cup, the feeds are in position for planting all small grain, beets, kafir corn and small seeds.



Position 1

Position No. 2

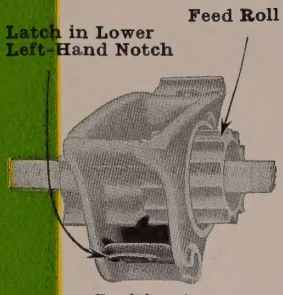
When the gates are up, with the latches in the right-hand notch, the feeds are in position for planting peas, soy beans, common beans and extra-large quantities of trashy oats.



Position 2

Position No. 3

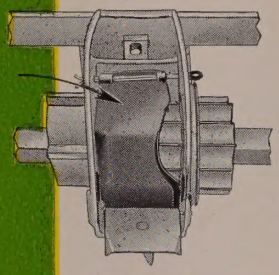
When the gates are up, with the latches in the lower notch on the left-hand side, the feed opening is set correctly for planting marrow fat or kidney beans.



Position 3

Position No. 4

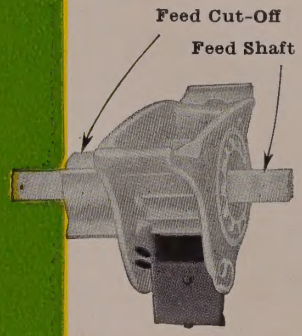
Arrow points to special soy bean gate which is furnished for use when planting soy beans in quantities up to 80 pounds per acre. The gate is easily attached with a cotter pin. When this special gate is used, the regular gate must be down.



Position 4

Position No. 5

The feeds can be quickly and easily cleaned, simply by dropping the adjustable hinged gates.



Position 5

A DRILL IS ONLY AS AS GOOD AS ITS FEEDS

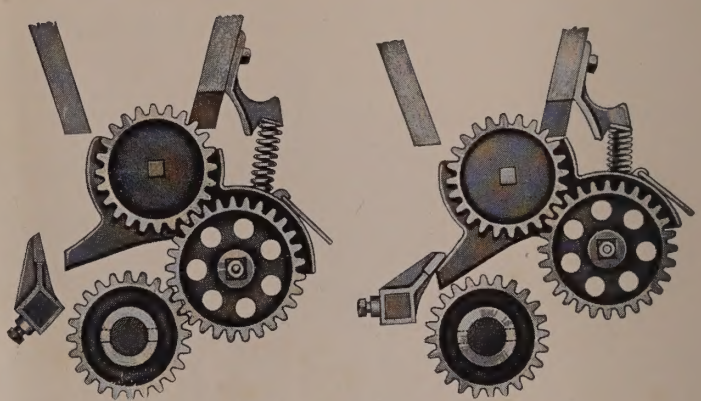
The John Deere-Van Brunt Fluted Force-Feed, shown in five positions at left, is your guaranty against faulty seeding. The one-piece seed cup, the adjustable gate, the crimped ring, the dependable feed roll and cut-off are John Deere features that insure uniform seeding, and permanent alignment. Once the feeds are set to plant a certain quantity of seed per acre, the amount will not vary. The rings which are crimped into the cups by special Van Brunt process, take up all slack and prevent wobbly feeds. The seed cup has a large reservoir which remains filled, the deep layer of seed forming a cushion between the feed roll and the bottom of the cup. The seed is scooped out; not scraped or dragged to cause injury to the kernels. You can plant wheat, oats barley, rye, flax, rice, alfalfa, peas of all kinds, soy beans, kidney and navy beans, corn, buckwheat, millet, vetch, hemp and many other kinds of seed, in any desired quantity per acre.

conditions are otherwise unfavorable for the growing of crops, an application of fertilizer in the rows with the seed supplements the plant food that is locked up in the soil and promotes early and vigorous root development, rapid growth, early maturity and a full, even stand. The crop is better able to resist the effects of drouth, weeds and insect pests and, by maturing from 5 days to two weeks earlier, is more likely to escape the early fall frosts.

Positive, Efficient Star Type Fertilizer Force-Feeds

John Deere-Van Brunt fertilizer mechanism is efficient under all conditions. Star type feeder wheels of improved design insure positive and uniform distribution of all kinds of commercial fertilizer in any quantity from 24 to 1680 pounds per acre. The feeder wheels and the improved knocker prevent dry fertilizer from clogging, and assure even distribution without skips and bare spots. If the fertilizer is damp or sticky, it is necessary to equip the drill with agitator, described on page 16.

Simple Three-Gear Drive Insures Positive Seeding



In Gear Out of Gear

The simple gear drive of exclusive John Deere-Van Brunt design, gives you smooth and steady operation without backlash or lost motion. It consists of feed shaft gears, intermediate gears and axle gears. Quick-detachable gear hangers complete the assembly.

The most important unit of the gear assembly is the axle drive gears which are mounted on each end of the frame axle and transmit the driving power from the ground wheels to the feed shafts. The mechanism ratchets perfectly when the drill is backed up and engages instantly when starting forward, giving instant pick-up and preventing bare spots in the field. The intermediate gears run on smooth, chilled bearings.

Strong coil springs on the gear hangers furnish the tension for keeping the intermediate gears in mesh. They can be held out of gear by the throw-out device.

Agitator for Damp Fertilizer

When using light or damp and sticky fertilizer, the fertilizer agitator will keep the fertilizer stirred and flowing steadily into the tubes. The agitator is an extra attachment which can be easily installed at any time.

Special Equipment Keeps Fertilizer Away from the Seed

When it is desired to distribute fertilizer without its coming in contact with the seed, the drill can be equipped with rubber tubes, metal boots and brackets, available as extra equipment, for depositing the fertilizer separately in the rows after a layer of soil falls over the seed. These extra parts make it possible to use a highly concentrated fertilizer without danger of firing the seed.

Efficient Seeding Mechanism

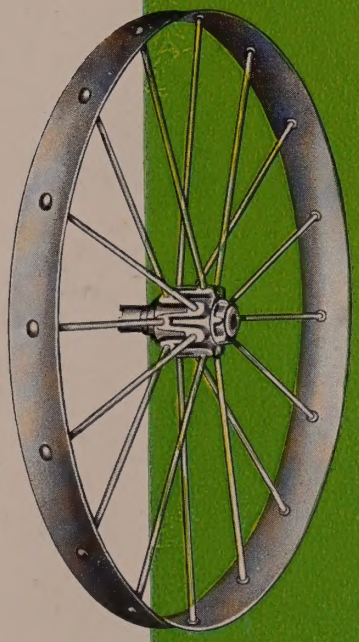
Of vital importance is the seeding mechanism, comprising the feeds, the driving units, the furrow openers and delivery boots. These are as important as the engine of your automobile or tractor and should have the same consideration in judging the performance you expect to get from the drill you buy.

John Deere-Van Brunt Adjustable Gate Fluted Force-Feeds are acknowledged to be the most accurate and dependable feeds used on a drill. The basic principles of design incorporated in the original model made by George Van Brunt in 1860 never have been surpassed.

The adjustable gate regulates the throat outlet of the feed for all varieties and different quantities of

(*Continued on page 12, second column*)

STURDY WHEELS WON'T LOP OVER



All of the weight is carried on the sturdy wheel boxings and long chilled bearings that extend under the box ends and support the weight from underneath, without bearing on the axles. This largely accounts for the light-running qualities of John Deere-Van Brunt Drills. Both the steel wheels and the wood wheels have surplus strength and will not lop over. The steel wheels can be furnished either with concave rims, as shown here, or with flanged rims.

JOHN DEERE-VAN BRUNT DRILLS Have Made Their Way by the Way They Are Made

John Deere-Van Brunt 16x7 Fertilizer-Grain Drill with double disks and tractor hitch. Sizes: 9x7, 10x7, 11x7, 12x7, 13x7, 16x7, 17x7; 8x8, 10x8, and the 5-disk style.

A Complete Line of Furrowing Equipment Makes JOHN DEERE-VAN BRUNT DRILLS Adaptable to All Conditions . . . .

Among the many improvements that the makers of John Deere-Van Brunt Drills have introduced to the grain drill industry, those made in furrow opener equipment, especially the single and double disk styles, are of outstanding value. John Deere-Van Brunt furrow openers make successful seeding certain. All styles have the jack knife spring pressure. Read about them here.

1 The famous John Deere-Van Brunt single disk bearing, introduced in 1901, and used on both the regular single disk and the moldboard deep furrow opener, is still the perfect bearing. It is made from special furrow opener, is still the as flint—runs smoothly and silently in a bath of oil—is dust-proof and wear-proof—has Alemite-Zerk lubrication. Double-disk bearing is made of the same long wearing material.

2 Single Disk Furrow Openers have no equal in hard or trashy ground—do not clog or choke up in wet, sticky soil—closed rear-delivery disk boots put seed on firm, moist soil at bottom of roomy trenches—"the seed beats the dirt"—seed germinates rapidly; roots have room to develop—disk is made from special long-lived heat-treated steel—has correct curvature for good penetration; adjustable steel scrapers.

3 Double Disk Furrow Opener does first-class job in any soil ready for seeding. The two blades of special heat-treated steel with sharp-cutting edges make W-shaped furrow of generous width—seed falls directly below center of disk—"the seed beats the dirt"—two inside scrapers and two out-side scrapers with adjustable tension prevent clogging—outside scrapers can be disengaged when not needed. Seed trenches are always uniform and the seed covered at even depth regardless of speed at which drill is operated.

4 The John Deere-Van Brunt One-Way Deep Furrow Opener having 16-inch blade with moldboard and seed deflector, has been designed to meet the demand for drills that throw all the dirt one way instead of to right and left from center. Makes level seed trench 4 inches wide—throws up high, rounded ridges. Checks blowing, drifting, and winter kill. Effective for spring or fall seeding. Used for every other feed opening on a 7-inch drill, the spacing between deep furrow disks is 14 inches. Practically only half the amount of seed and fertilizer is necessary.

5 Hoe Type Furrow Openers are used under certain conditions—stand hard knocks—regular with safety spring-trip that forces hoes back after striking obstruction—pin-break style available. The hoe type openers used on shifter hoe drills are not interchangeable with other types. See page 16 for description of shifter hoe drill.

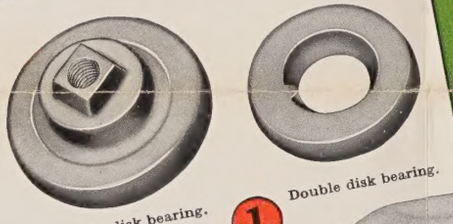
6 Two-Piece Beet Press Wheel used in connection with single-disk, double-disk and shoe openers make John Deere-Van Brunt Drills of great value to beet growers. A wheel runs behind each opener, packing soil over seed to promote quick germination and to reduce blowing—adjustable for deep or shallow seeding—especially valuable in light soil.

7 Shoe Type Opener is used in some sections where ground is not too hard—made of two pieces of hard steel welded to center plate and tempered—cutting edge of solid steel wears longer—can be sharpened by blacksmith—spring pressure applied on heel regulates depth.

Note—All styles of John Deere-Van Brunt Furrow Openers (excepting shifter hoes) are interchangeable on John Deere-Van Brunt Drills.

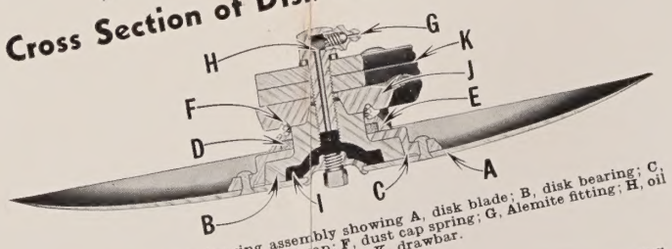
DISK BEARINGS HARD AS FLINT

A coarse file can scarcely make an impression on the hard chilled iron bearings used on the single- and double-disk openers. They're hard as flint and will last as long as the drill, if kept properly lubricated.



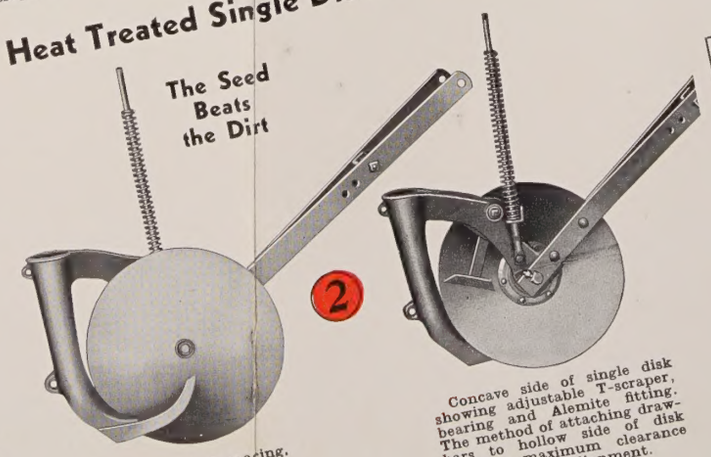
Single-disk bearing. Double disk bearing.

Cross Section of Disk Bearing Assembly



Cross section of disk bearing assembly showing A, disk blade; B, disk bearing; C, bearing case; D, felt washer; E, dust cap; F, dust cap spring; G, Alemite fitting; H, oil passage; I, oil reservoir; J, disk boot casting; K, drawbar.

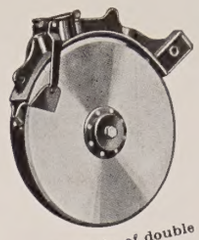
Heat Treated Single Disk Furrow Opener



For 7- and 8-inch spacing.

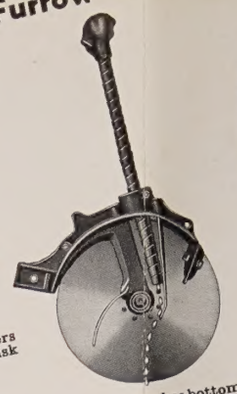
Concave side of single disk showing adjustable T-scraper, bearing and Alemite fitting. The method of attaching draw-bars to hollow side of disk provides maximum clearance and permanent alignment.

Double-Disk Furrow Opener



Flat side of double disk opener.

Adjustable scrapers keep inside of disk blades clean.

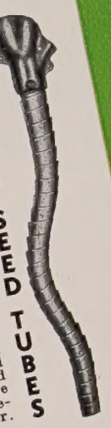


Grain reaches bottom of furrow before turn of disk starts upward.

Rear View Van Brunt double disk.

Hoe Type Furrow Opener

Top picture at left shows the regular safety spring-trip hoe type opener. Powerful spring forces opener back to working position after meeting an obstruction. The other picture is of the pin-break hoe; wood pins which hold the hoes in position, break under severe strain, and must be replaced.



FLEXIBLE SEED TUBES

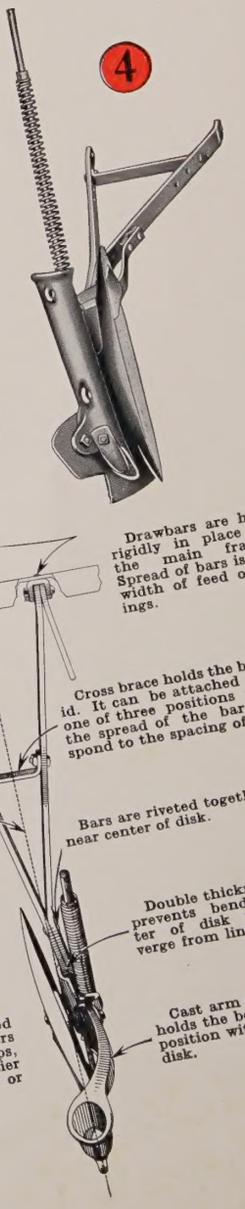
Right illustrates flexibility of steel ribbon seed and fertilizer tubes. They conform to every motion of the drill without kinking, buckling or sticking in boot, and allow free movement of seed and fertilizer. Enameled as preventive against rust. High-top sides prevent blowing of seed and fertilizer.

Single Disk with Beet Press Wheel

The single disk opener with two-piece press wheel and scrapers A-type drawbars attached to frame angle at two points to insure straight, even rows, and the jack-knife effect in applying pressure, make the John Deere-Van Brunt Drill the first choice of beet growers. Furrow openers in the double-disk shoe or hoe styles can be used in place of single disks.

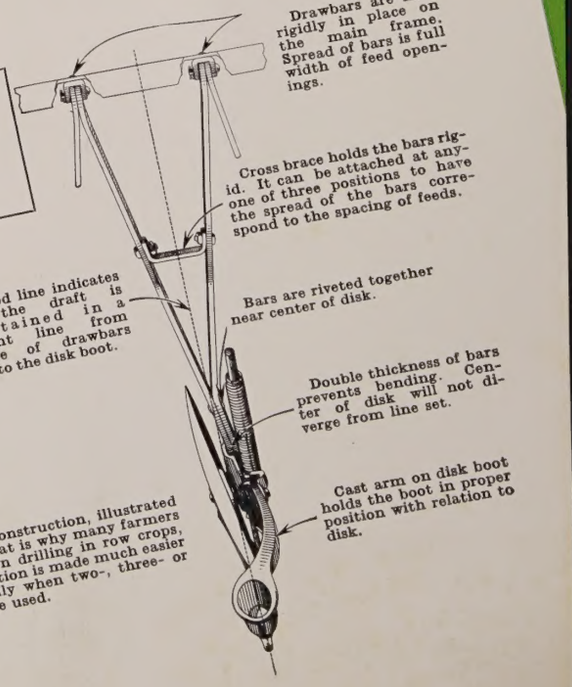
Shoe Furrow Opener

Interchangeable with Disk and Hoe Openers.



16-Inch Moldboard Deep Furrow Opener

Rear view at right shows the seed deflector at the bottom opening of the disk boot. The deflector is easily adjusted for sowing the grain in a narrow strip or scattering it over the full width of the 4-inch trench. The 7-, and 8-inch drills can be converted into 14-, and 16-inch drills, respectively, by removing the regular 13-inch disk blades and using this 16-inch disk blade for every other feed opening, stopping up the feeds not in use.



A SIZE FOR EVERY FARM; A TYPE FOR EVERY SOIL

The type of John Deere-Van Brunt construction, illustrated above, insures straight, even rows. That is why many farmers prefer the John Deere-Van Brunt when drilling in row crops, such as beans, peas and corn. Cultivation is made much easier with straight, even planting, especially when two-, three- or four-row tractor cultivating outfits are used.

When You Buy a JOHN DEERE-VAN BRUNT FERTILIZER-GRAIN DRILL, You May Be Sure That You Are Getting the Utmost in Seeding Efficiency—Read These 17 Points:

1. Built by an organization that has been making high quality seeding machinery for more than 75 years.
2. Declared by users to be the strongest, lightest-running, most accurate and dependable drill of its kind; assures more bushels per acre at less cost per bushel. Rigidly-braced angle steel frame provides an unusually strong construction. Built like a bridge; will not buckle or sag.
3. Does four complete operations at same time—pulverizes the soil, drills in the seed, drills in the fertilizer, and covers both the seed and the fertilizer. Deposits the seed and fertilizer at the bottom of straight furrows of even depth.
4. Improved star-type fertilizer feeds insure positive and uniform distribution of all kinds of commercial fertilizer in quantities ranging from 24 to 1680 pounds per acre. Fertilizer can be sown broadcast on top of the ground, it can be drilled in along with the seed or, by using the special parts described on page 13, the fertilizer can be deposited slightly behind and above the seed, after a layer of soil has fallen on top of the grain to protect it from the fertilizer.
5. Perfect balance, light draft and absence of neck weight are outstanding qualities of this better drill.
6. All weight is carried on the heavy chilled wheel boxings and long chilled bearings, which extend under the frame and support the weight from underneath. Strong steel wheels or wood wheels can be furnished. Wheels will not lop over.
7. This construction takes the load off the axles and permits them to float. Years are added to the life of the drill through the use of full-floating axles; the drill runs easier and holds its shape longer.
8. Three-gear drive of exclusive John Deere-Van Brunt design, consisting of feed shaft gear, intermediate gear and axle gear, prevents slack and backlash, insures speedy pickup and smooth, uniform seeding; no seed is wasted; no ground is skipped.
9. Furrow openers of different styles adapt the drills to all seeding conditions. There's a type for every soil. The famous John Deere-Van Brunt single- and double-disk openers have long-wearing, heat-treated blades. Bearings, hard as flint, will last the life of drill, if kept properly lubricated. Hoe and shoe type openers are interchangeable with disks. The Model "F" can be converted into a deep furrow drill by equipping it with single-disk openers having 16-inch blades with moldboard and seed deflector, instead of the regular openers, and closing up every other feed opening. Thus, a drill regularly equipped with sixteen openers, spaced 7 inches apart, will take eight 16-inch single-disk deep-furrow openers spaced 14 inches apart. The deep furrow openers with moldboard throw all the dirt one way, make 4-inch seed trenches, and turn up high, rounded ridges. See pictures and descriptions of furrow equipment on inside pages. The shifter hoe drills require special shifter hoe openers which are not interchangeable with other types.

10. Improved John Deere-Van Brunt Adjustable Gate Fluted Force-Feed has a one-piece seed cup that keeps the feed permanently in alignment—essential to good seeding. The reservoir of the cup is always filled with seed which is readily picked up by the feed rolls and released through the opening, thus avoiding skipping or bunching of the seed. The ring is crimped into the cup by a special Van Brunt process, which prevents the feed from becoming wobbly.
11. This feed is acknowledged to be the most accurate and dependable seeding device ever used on a drill. It is capable of seeding any desired quantity of seed per acre.
12. Tilting levers on horse-drawn drills enable you to adjust the front of frame up or down instantly for best seeding results in varying soil conditions. Adjusting straps on the tractor drills serve the same purpose. This is an exclusive John Deere-Van Brunt feature.
13. Power lift on tractor drills can be operated from the tractor by means of trip rope. Openers can be raised or lowered instantly, without stopping the tractor, simply by pulling trip rope. Horse-drawn drills with power lift have similar arrangement for raising and lowering the openers. Screw depth regulator on power-lift drills enables you to change the planting depth at any time without stopping, to meet varying field conditions. Power lift on horse-drawn drills requires hand wheel adjustment.
14. Absence of obstructions or projections at rear of drill makes it easy to fill the boxes without spilling grain or fertilizer. Generous clearance between furrow openers reduces clogging; an outstanding feature. Alemite fittings provide quick and thorough lubrication.
15. Large variety of attachments and special equipment, including fertilizer agitator, grain agitator, automatic markers, gang press wheel attachment and grass seed attachment can be furnished to adapt the drill to all conditions.
16. Special fertilizer parts, consisting of rubber tubes, metal boots and brackets, can be furnished for sowing fertilizer so it does not come in contact with the seed. See description of fertilizer attachment on page 13.
17. Simple grain agitator, which can be furnished, insures steady, positive seeding of trashy oats and other grain not properly cleaned. The fertilizer agitator keeps damp or light fertilizer stirred and flowing evenly. Easy to install and remove for cleaning feeds.

A GREAT DRILL FOR ROW CROPS

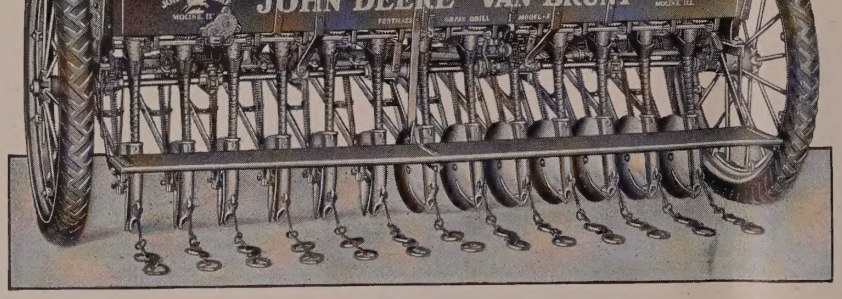
John Deere-Van Brunt Fertilizer-Grain Drills are used extensively for planting row crops. They are especially favored for common beans, soy beans, peas, sugar beets, and, in some territories, for planting corn.

Because the rows are always straight and evenly spaced, crops drilled in with a John Deere-Van Brunt are easy to cultivate with a two- or three-row general purpose tractor corn cultivator or a four-row general purpose tractor bean cultivator. The A-type drawbars, which are rigidly attached to the frame at two points, prevent the disks from weaving and causing crooked rows. A permanent straight line of draft is maintained, assuring uniform planting under all conditions. See drawbar construction on inside pages.

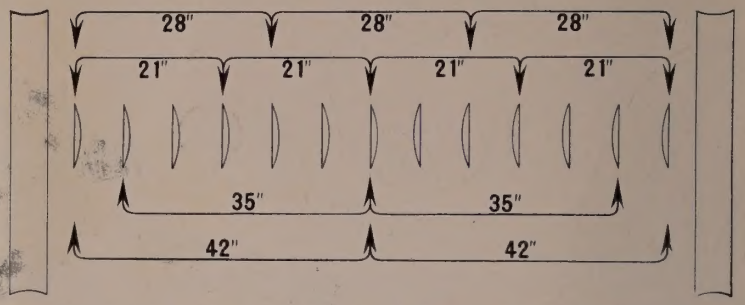
Only drills equipped with automatic markers are recommended for planting row crops. Here are several examples of how drills of different widths can be spaced for various row widths. The 11 x 7 size will plant three 28-inch rows or two 42-inch rows; the 13 x 7 will plant five 21-inch rows, four 28-inch rows or three 42-inch rows; the 17 x 7 will plant five 28-inch rows or three 42-inch rows. See illustration of 13 x 7 drill spacings at top of page. Fertilizer can be distributed at the same time the row crops are planted, either in the rows or on one side or both sides of the rows.

In preparing the drill for row-crop planting, simply close the grain and fertilizer feeds that are not to be used. Feed stops, illustrated at right, can be furnished for closing the feed openings.

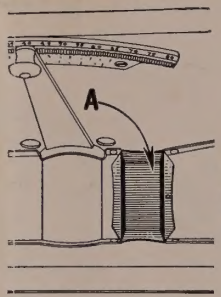
All of the furrow openers can be left on the machine, those between the rows being used for stirring the soil and, if desired, for distributing fertilizer.



Model "F" 13x7 Fertilizer-Grain Drill equipped with rubber tires and full length footboard.

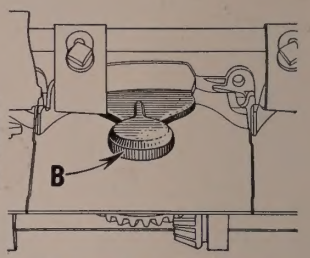


Arrows point to the feeds that are left open when planting row crops in 21-, 28-, 35-, and 42-inch rows, with the 13 x 7 drill. Drills of other sizes can be similarly spaced.



Feed Stop in Grain Box.

Arrows A and B point to feed stops for shutting off flow of grain and fertilizer when planting row crops.



Feed Stop in Fertilizer Box.

(Continued from page 6)

grain. When the gates are adjusted properly and the feed shaft shifting levers are set to sow a given quantity per acre, the seed is forced out without skips or bunching, the same quantity coming from every feed. No seed or land is wasted when you use a John Deere-Van Brunt Drill. John Deere-Van Brunt Fluted Force-Feeds are capable of seeding all varieties of seed in any quantity per acre desired. (See illustrations and descriptions of feeds on pages 4 and 5.) To change the quantity to be seeded, simply move the shifting levers to the proper notch on the seed index plates.

Seed Carried to Bottom of Furrows

Scooped (not scraped or dragged) from the feed cups, the seed is guided by the flexible, rust-resisting steel ribbon tubes and closed rear delivery boots to the bottom of straight, even furrows of uniform depth, and deposited on firm, moist soil, before any soil falls back into the trenches. The seed always beats the dirt.

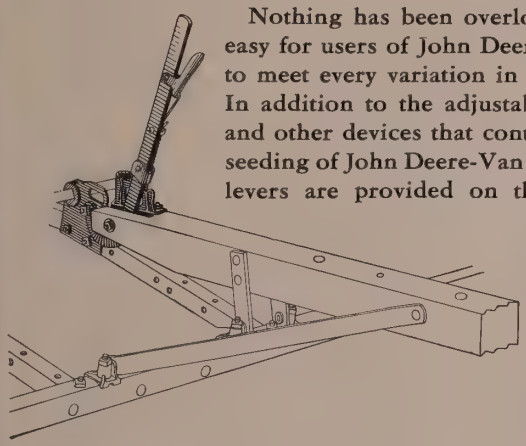
Jackknife Spring Pressure

Spring pressure on the furrow openers keeps the drill planting at even depth. The John Deere-Van Brunt construction provides the so-called jackknife effect in applying pressure, instead of the straight up-and-down method, commonly used. Pressure is applied directly to the furrow opener, right where it belongs. Adjustments can be made quickly for lighter or heavier pressure, by moving the washer up or down in notches on the pressure rods.

Furrow Openers for All Conditions

Responsible in large measure for the seeding efficiency of John Deere-Van Brunt Drills are the furrow openers which are available in various styles to meet any planting condition. All styles of openers are made from high-grade, long-wearing, heat-treated materials and are properly designed to give best results in the conditions for which they are intended.

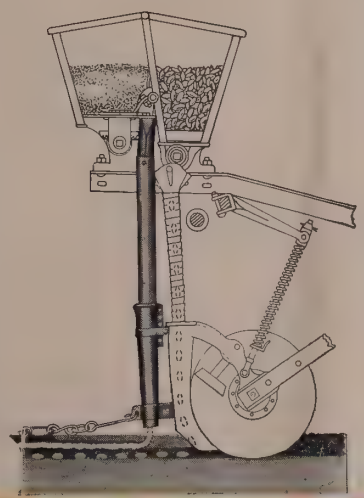
Tilting Levers a Feature

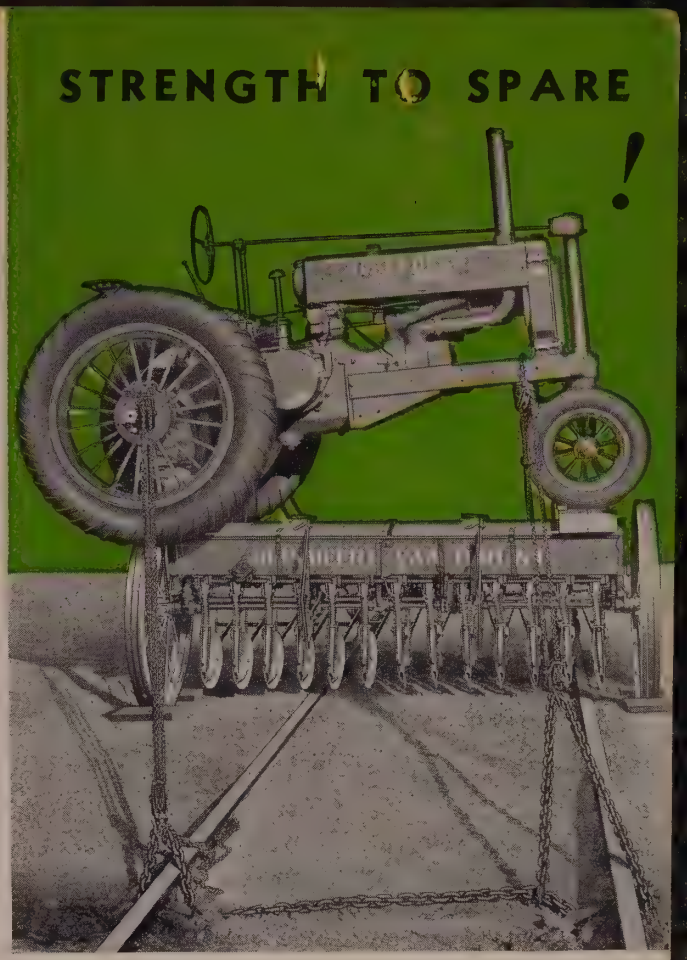


Nothing has been overlooked in making it easy for users of John Deere-Van Brunt Drills to meet every variation in ground conditions. In addition to the adjustable spring pressure and other devices that contribute to the better seeding of John Deere-Van Brunt Drills, tilting levers are provided on the poles of horse-drawn drills for adjusting the furrow openers instantly for deep or shallow seeding. Adjusting straps serve the same purpose on tractor drills.

Separate Spouts, Tubes Available

Picture at right shows how, with the special fertilizer tubes and spouts for the Model "F" Drills, the fertilizer can be released so that it does not come in contact with the seed and injure it. The fertilizer is released behind the seed, after a layer of soil has fallen on top. The fertilizer also can be released through the regular seed tubes and drilled in with the seed.





Both the single-disk and double-disk openers are made from special heat-treated steel. They penetrate readily and make trenches of generous width where the seed may germinate rapidly and the roots have plenty of room to develop.

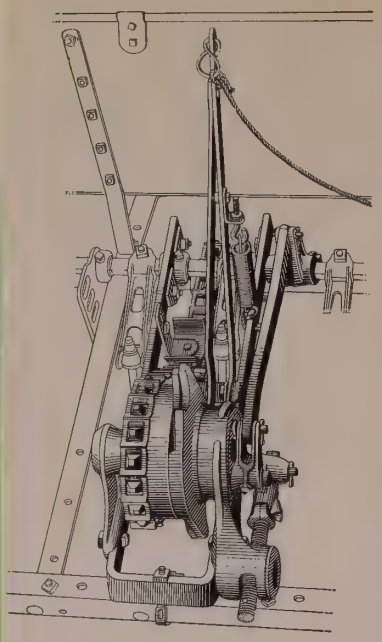
The drawbars are attached to the hollow side of the single-disk for greater clearance. Closed rear delivery disk boots protect the seed until it reaches the bottom of the furrows. Two scrapers of spring steel keep both sides of the disk clean. The T-scraper on the hollow side of disk can be disengaged when not needed, thereby reducing friction.

Inside and outside scrapers are provided on the double-disk openers where they do the most good in preventing clogging. Seed trenches are uniform and the seed is always covered at even depth regardless of the speed at which the drill is operated.

Chilled bearings on all styles of disk openers are hard as flint and run in a bath of oil. They are dust-proof and practically wear-proof—they will last as long as the drill, if kept properly lubricated. Single-,

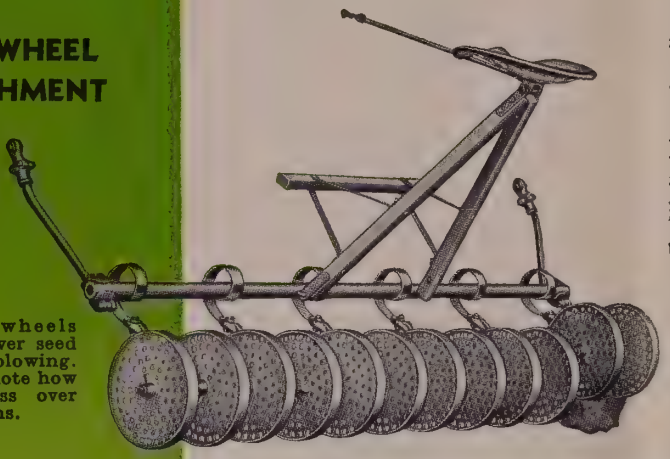
POSITIVE POWER LIFT

The power lift and depth regulator can be furnished on Model "F" Drills. Furrow openers can be raised or lowered, instantly, without stopping the tractor, simply by pulling trip rope from your position on the tractor seat. The depth regulator gives you control of depth by means of convenient hand crank on tractor-drawn drills and by hand wheel on horse-drawn drills.



PRESS WHEEL ATTACHMENT

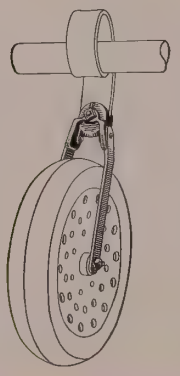
For Drills with Openers Spaced 7 or 8 Inches Apart.



Press wheels pack soil over seed to reduce blowing. Flexible—note how wheels pass over obstructions.

PRESS WHEELS for DEEP FURROW DRILLS

This is the type of press wheel used on the deep-furrow drills with disks spaced 12, 14 or 16 inches apart. Each wheel weighs 28-1/2 pounds, is 15 inches in diameter and 3-1/2 inches thick.



double-disk and single-disk moldboard deep furrow openers are interchangeable with the shoe and hoe types.

(See the cross-sectional view of the single-disk bearing assembly, also the complete line of opener equipment, illustrated and fully described on the inside pages.)

Full-Floating Axles; Weight on Chilled Bearings

One reason why John Deere-Van Brunt Drills are the lightest-running drills made is because the axles are full-floating. All the weight is carried on heavy wheel boxings and long chilled bearings. The bearings extend under the box at both ends and support the weight from underneath. This takes the load off the axles and allows them to run free—the axles are full-floating. The result is a smooth-running drill that always holds its shape and does good work throughout its long life.

Strength to Spare

Just to give you an idea how strong and sturdy the John Deere-Van Brunt Fertilizer-Grain Drill is built, a John Deere Model "A" Tractor weighing approximately 3,500 pounds was mounted on the grain box, and the drill neither buckled nor sagged.

This abundance of surplus strength certainly gives you the assurance of more years of trouble-free drill service in your fields. It is ample proof that nothing has been spared in making this drill a better value than ever before. See page 13.

Perfect Balance—No Neck Weight

An important feature of construction that contributes in no small way to the good work and light draft of John Deere-Van Brunt Drills is their perfect balance. All neck weight is eliminated and there is no danger of the front end of the machine tipping up and putting undue strain on the horses.

Heavy Steel Wheels

The Model "F" can be furnished with either the concave-rimmed or the flange-rimmed steel wheels. Heavy chilled iron boxing and long chilled bearings carry the load; the wheels will not lop over. Heavy round spokes are set with plenty of stagger to insure maximum strength. Wood wheels can be furnished instead of steel wheels when wanted. John Deere-

Planting a field with a John Deere-Van Brunt Drill as fast as the seed bed is made with a John Deere-Van Brunt Model "CC" Field and Orchard Cultivator. A caster wheel is used to support the front end of drill.

Van Brunt Drills of all types and sizes also can be equipped with pneumatic rubber tires.

Folding Lifting Levers

Lifting levers for horse-drawn drills are of a new design, the kind that give instant action on the furrow openers. They are collapsible and can be folded over the box instantly, out of the way when the drill is not in use. The smaller drills are furnished with one lever.

Positive Power Lift for Tractor Drills

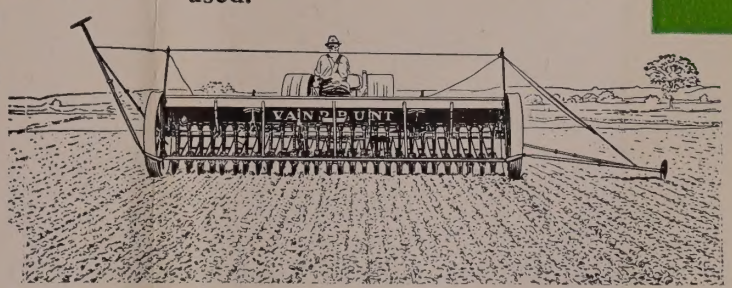
Tractor-drawn drills equipped with power lift and depth regulator have no hand levers or ratchets, but instead, the openers are raised and lowered by means of trip ropes. This can be done while drill is in motion—a pull on the rope raises the openers and disengages the seeding mechanism; another pull on the same rope lowers the openers and engages the seeding mechanism. The tractor operator has complete control of the power lift from the tractor seat. The John Deere-Van Brunt power lift is strong, simple, positive and easily handled. The depth regulator enables you to change the planting depth at any time to meet changing conditions. Power lift for horse-drawn drills is furnished with hand wheel instead of crank for adjusting planting depth.

Automatic Balance Spring

The automatic balance spring, which attaches to the front frame angle and the pressure arm shaft, is a valuable aid in raising and lowering the furrow openers. When this spring is properly adjusted, a boy can readily raise the openers or force them into the ground.

Gang Press Wheel Attachment

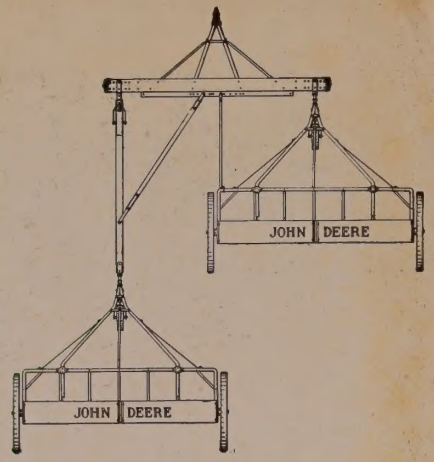
This attachment is designed for use in place of covering chains where the soil is light and sandy and likely to blow. The press wheels run behind the furrow openers and pack the soil firmly over the seed. Weight of the driver is applied direct to the wheels. When a drill is equipped with deep furrow openers, press wheels having a 3-1/2-inch face and weighing 28-1/2 pounds apiece are used.

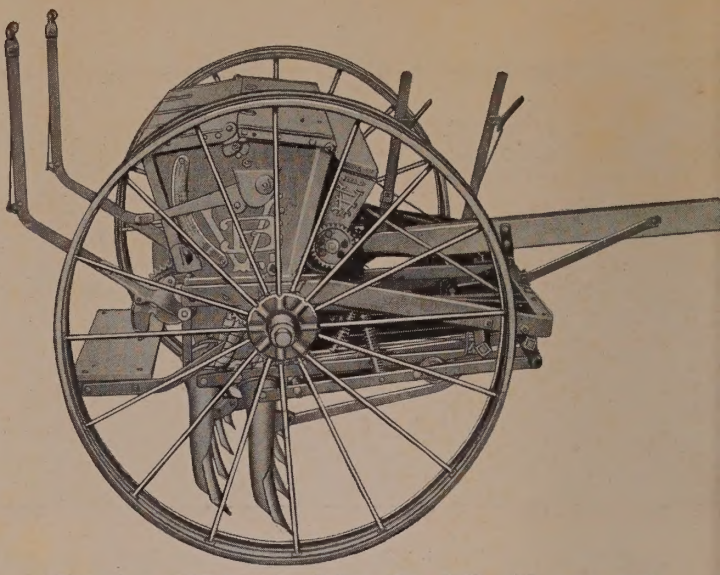


John Deere-Van Brunt automatic disk markers meet the demand for a dependable marker that can be used on all grain drills, both horse-drawn and tractor-drawn. They can be operated from the tractor or from the footboard. When rope is pulled to raise one marker, the other marker is lowered automatically. Markers should be used on all drills for best seeding results.

TWO DRILLS CONTROLLED FROM TRACTOR

The John Deere-Van Brunt two-drill tractor hitch enables one man, the tractor operator, to control two power-lifted drills from the tractor seat. A pull on the trip rope lowers the openers and starts the planting; another pull on the same rope raises the openers and stops the planting. This gives you a big-capacity, flexible outfit that is both practical and economical.

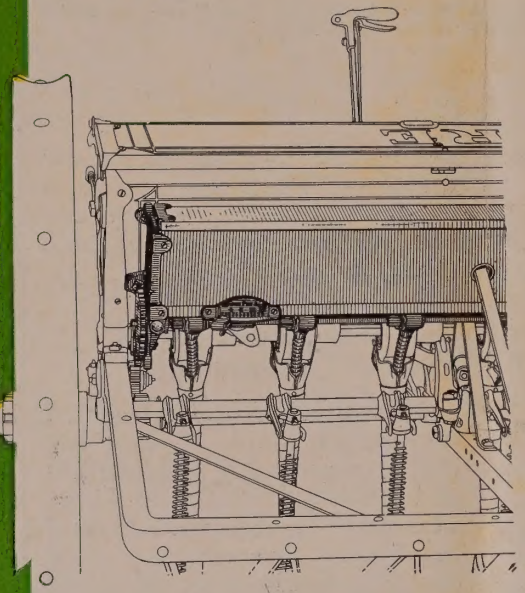


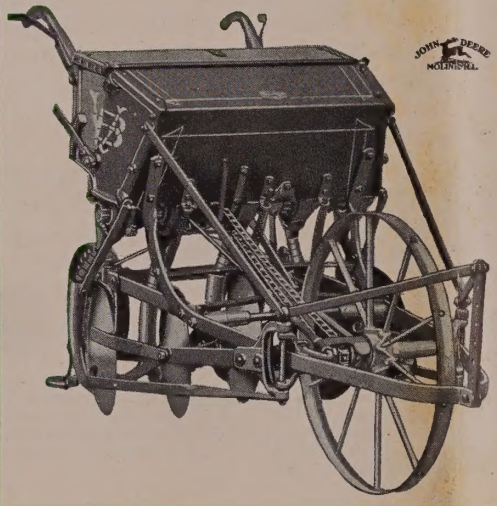


Side view of Model "F" Shifter Hoe Drill with grass seed attachment.

GRASS SEED ATTACHMENT

Drawing at right shows grass seed attachment for drilling or broadcasting clover, timothy, alfalfa, hemp, mustard and similar seeds. Tubes are shown here in position for drilling. They can be allowed to hang free for broadcasting grass seed alone or at the same time the grain is drilled.





John Deere-Van Brunt Model "X" 5-Disk One-Horse Fertilizer-Grain Drill

For seeding between rows of standing corn or cotton and for small acreages. It has all the good features of the larger John Deere-Van Brunt Drills.

The Model "V" is not built with fertilizer unit.

Shifter Hoe Drill

The shifter hoe drill is used successfully under certain conditions. A lever is provided to give the hoe openers any desired setting from straight row to extreme zigzag. When set zigzag, they afford the maximum amount of clearance and, at the same time, plant the seed so that no ground is left unseeded.

Spring-trip forces the hoes back into working position after meeting an obstruction.

Shifter hoe openers are not interchangeable with other types of furrow openers.

Gear Throw-Out Attachment

The gear throw-out attachment can be used where it is desired to seed around the field without taking the furrow openers out of the ground. A pull on the trip rope disengages the seeding mechanism; another pull on the same rope engages the seeding mechanism. This attachment can be used on drills that do not have the power lift.

Grain Agitator Available

The grain agitator, which can be furnished, is of the revolving type that keeps the contents of the box constantly in motion and forces the grain into the feeds. Agitators are required only when seeding bearded or trashy oats and barley or other grain not properly cleaned.

Strong, New Tractor Hitch

The strong, new, reinforced tractor hitch furnished regularly on large drills will withstand the pull of the heaviest load.

JOHN DEERE QUALITY EQUIPMENT *for* Your Farming Operations

Tractors
Eleven sizes and styles, including standard-tread tractors in one-, two-, three-, and four-plow sizes; adjustable tread, general purpose tractors in two-, and four-row sizes; grove and orchard tractors in one-, and two-plow sizes.

Plows
All sizes and types for use with horses or tractor. Moldboard types equipped with genuine John Deere steel or chilled bottoms. Disk plows; middlebreakers; listing plows. Disk Tillers in sizes for all tractors.

Harvesting Machinery
Combines and threshers. Grain binders, corn binders, rice binders, for horses or tractor. Power-driven one-, and two-row corn pickers. Ensilage harvester. Kafir header. Beet lifters. Cotton harvesters. Grain shock sweeps.

Harrows
Single-, and double-action disk types for horses or tractor. Special disk harrows for orchard, vineyard, and cover crop work. Spike-tooth harrows; spring-tooth harrows, and spring-tooth weed destroyers. Stalk cutters, one-, and two-row.

Wagons, Trucks, Trailers
Furnished in different types and sizes to meet all farm needs.

Grain Elevators
Portable and stationary types for ear corn and small grains, portable type for small grains only.

Listers
One-, two-, and three-row for cotton, corn, and other crops. Tractor- and horse-drawn.

Manure Spreaders
Horse-drawn and power-driven. Also lime-spreading attachment.

Hay Machinery
Enclosed-gear horse mowers; tractor mower; power-driven mower; side-delivery rakes for horse and tractor; single-, and double-cylinder and combination raker bar-cylinder loaders; overshot stackers; sweep rakes; sulky rakes; motor presses; pull-power presses; windrow pick-up presses.

Potato Machinery
One-, and two-row planters, with or without fertilizer attachment. Two-row tractor-drive diggers. One-row diggers—ground, engine and tractor-drive. Hoes and hilling attachments. Fertilizer distributors; seed cutters.

Cultivators
One-, two-, four-, and six-row for surface-planted crops; one-, two-, three-, four-, and five-row for listed crops. Field and orchard cultivators with stiff or spring teeth for horses or tractor. Alfalfa cultivators. Special two-, three-, and four-row beet and bean cultivators. Deep tilling cultivators. Rotary hoes. Rod weeders.

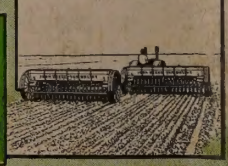
Engines
A line of enclosed engines that oil themselves, in a variety of sizes, up to 42-H. P. Pump jacks.

Corn Shellers
For hand and power use. Spring and cylinder types.

Planters
One-, two-, three-, and four-row sizes for corn, cotton, peanuts, beets, beans and other seeds. Walking and riding types. With or without fertilizer attachment. Special 2-, 3-, 4-, and 6-row planters for beets, beans, etc.

Grain Drills
With fluted force-feed or double-run feed. Choice of furrow openers. One-horse size to 24-foot size. Fertilizer-grain drills. Lister drills. Broadcast seeders, lime and fertilizer distributors. Grass seed drills, press drills, plow press drill, deep furrow drills, big box sowers and endgate seeders.

John Deere Gave to the World the Steel Plow in 1837



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